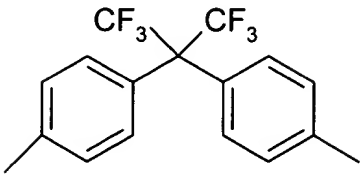
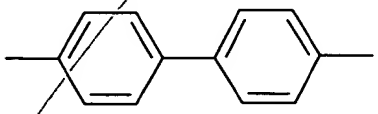
wherein Ar does not equal Ar',

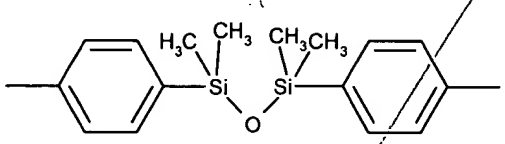
wherein z is greater than or equal to 2, and

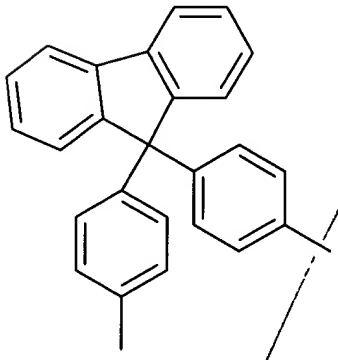
wherein x and y each are greater than or equal to 1, respectively, and

wherein the Ar and the Ar' groups each comprise substituted or nonsubstituted aryls selected from the group comprising:

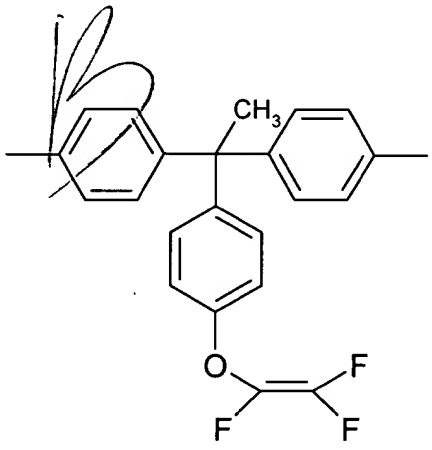


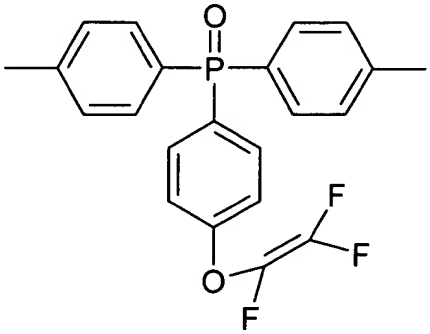


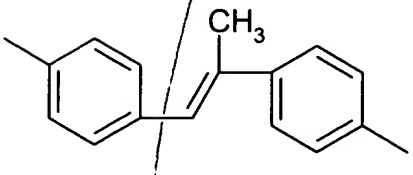


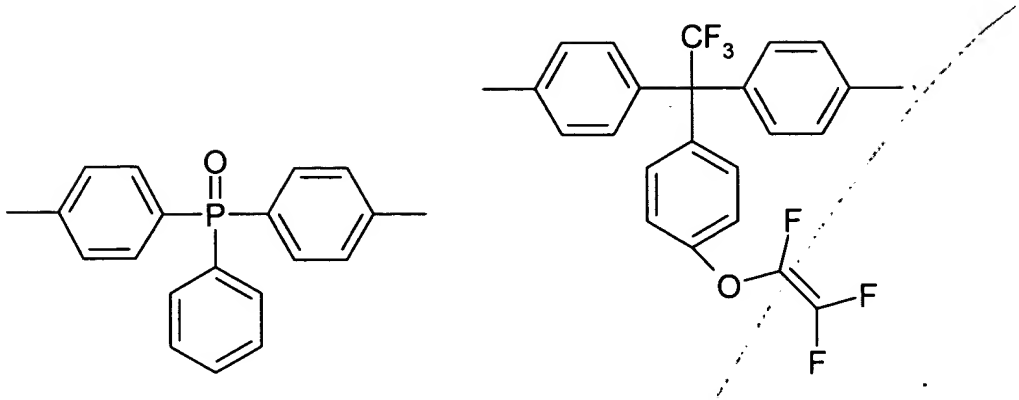


Ar cont.









A1 cont.

(b) applying the copolymer composition by coating to form a first film.

2. (Amended) The method of claim 1 in which at least one of Ar and Ar' is a trifluorovinyl aromatic ether.

A2

6. (Amended) The method of claim 1 comprising the additional step of thermally curing the first film to form a cured thermoset film.

16. (Amended) A method of making an optical device, comprising:

(a) providing a perfluorocyclobutyl-based copolymer composition having a solids content of greater than 50%;

(b) coating the perfluorocyclobutyl-based copolymer composition upon a substrate to form a first film, and

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(c) thermally curing the first film to form a thermoset film.

17. (Amended) The method of claim 16 in which the thermoset film comprises a substantially transparent polymeric core of an optical waveguide.

18. (Amended) The method of claim 17 comprising the additional step of applying cladding comprising a perfluorocyclobutyl-based copolymer to the outer surface of the core.

28. (Amended) A method of making an optical device, comprising:

(a) providing a first perfluorocyclobutyl-based copolymer composition,

(b) spin coating the first perfluorocyclobutyl-based copolymer composition upon a substrate to form a first film, wherein the first film forms a substantially transparent polymeric core,

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(d) providing a second perfluorocylcobutyl-based copolymer composition different than the first perfluorocyclobutyl-based copolymer composition, and

(e) spin coating the second perfluorocyclobutyl-based copolymer compostion upon the first film, wherein the second film forms a polymeric clad.

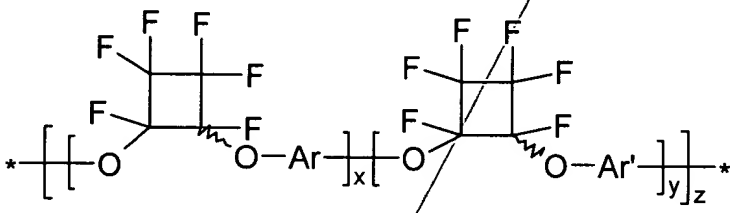
29. (Amended) An optical device constructed by the method of:

(a) providing a perfluorocyclobutyl-based copolymer composition having a solids content of greater than 50%,

(b) spin coating the perfluorocyclobutyl-based copolymer composition upon a substrate to form a first film, wherein the first film forms a core for an optical device having a cured film thickness of at least about 0.6 microns.

30. (Amended) A solution for making an optical device in which the solution comprises a perfluorocyclobutyl-based copolymer having a solids composition of greater than 50%, the copolymer having the structural formula:

A4 cont.



where Ar does not equal Ar',

wherein z is greater than or equal to 2, and

wherein x and y each are greater than or equal to 1, respectively.

Please add new claims 33-47 as follows:

33. (New) The method of claim 1, wherein the first film is a core of an optical device.

34. (New) The method of claim 33, further comprising:

(c) providing a second composition having a solids content of greater than 50% comprising a perfluorocyclobutyl-based copolymer,

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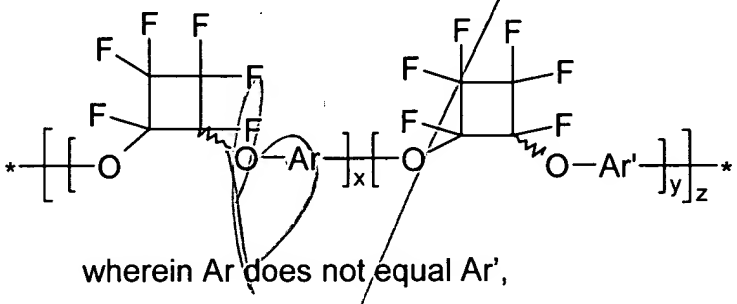
(d) applying the second copolymer composition to the first film to form a second film, wherein the second film is a clad in an optical device.

35. (New) The method of claim 1, wherein the thickness of the first film is between about 10 and about 50 microns.

36. (New) The method of claim 16, wherein the thickness of the thermoset film is between about 10 and about 50 microns.

37. (New) The method of claim 28, wherein the first cured film and the second cured film are each about at least about 10 microns thick.

38. (New) The method of claim 28, wherein the first and second copolymer compositions comprise perfluorocyclobutyl-based copolymers having the structural formula:



wherein Ar does not equal Ar',

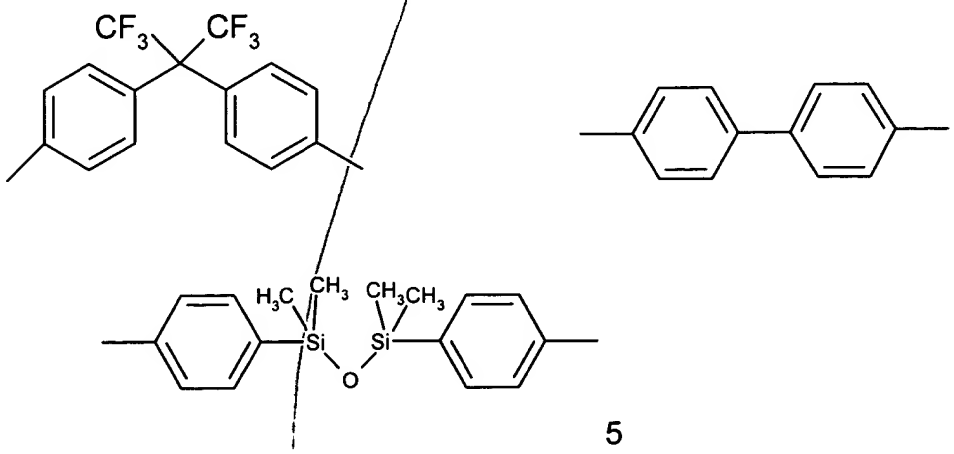
wherein z is greater than or equal to 2, and

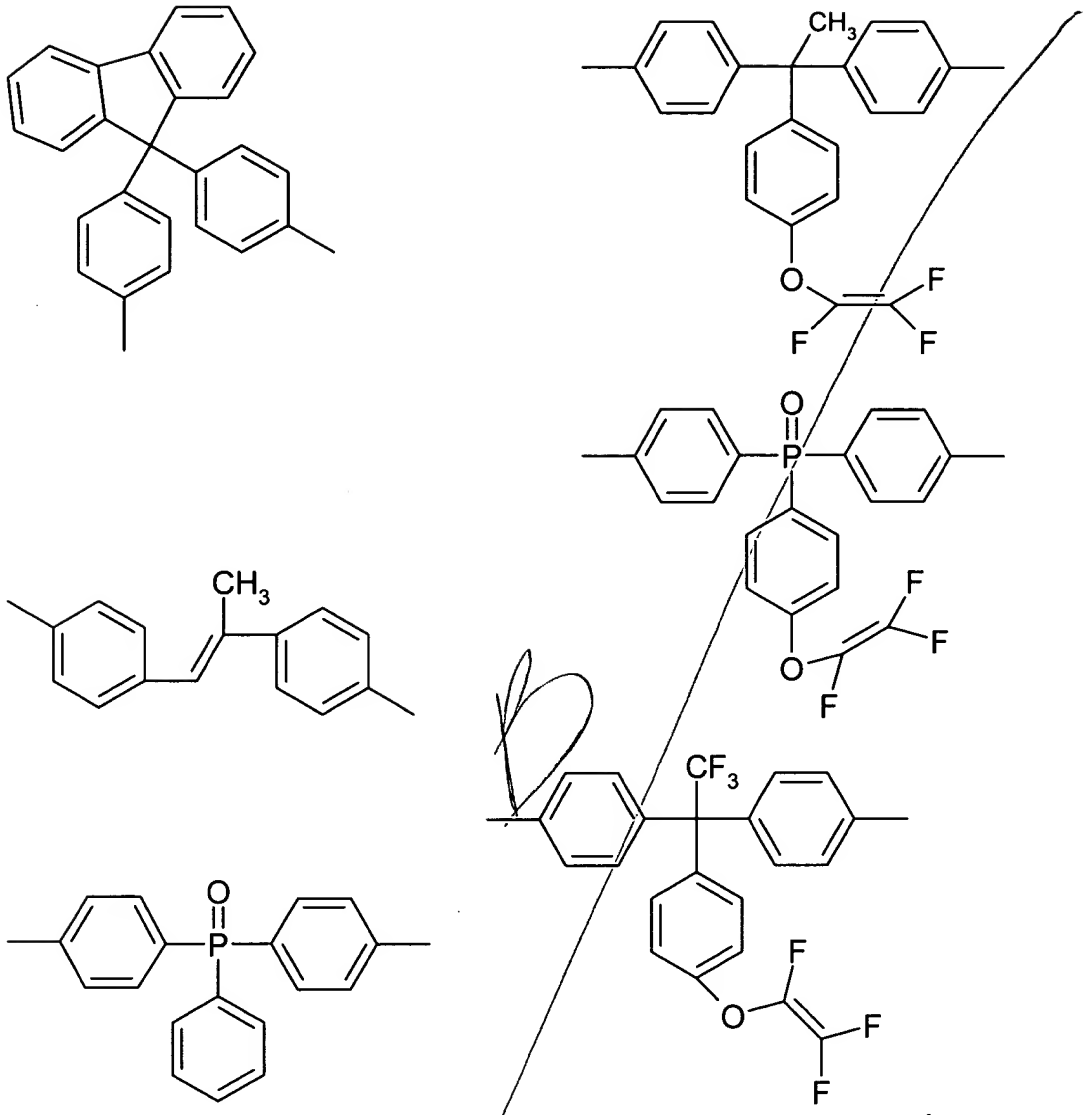
wherein x and y each are greater than or equal to 1, respectively.

AS cont.

39. (New) The method of claim 38, wherein at least one of Ar or Ar' is a trifluorovinyl aromatic ether.

40. (New) The method of claim 38, wherein the Ar and the Ar' groups each comprise substituted or nonsubstituted aryls selected from the group comprising:





A5 cont.

41. (New) The method of claim 29, further comprising forming a second film on the core, the second film comprising a thermoset perfluorocyclobutyl-based copolymer, wherein the second film is a clad for an optical device having a cured film thickness of at least about 0.6 microns.

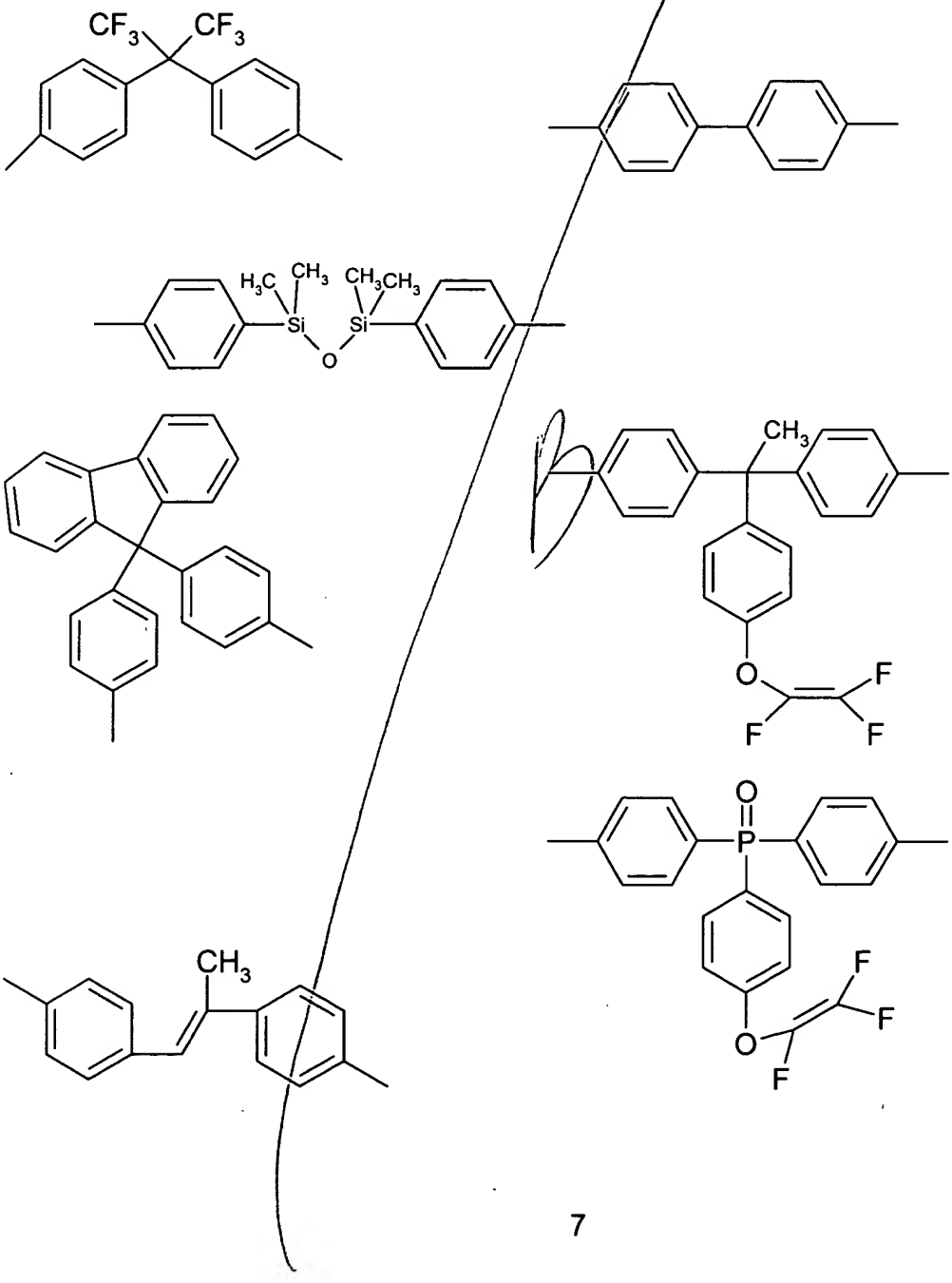
42. (New) The method of claim 41, wherein the first film and the second film each have a thickness of at least about 5 microns.

43. (New) The method of claim 41, wherein the first film and the second film each have a thickness of at least about 10 microns.

44. (New) The method of claim 41, wherein the first film and the second film each have a thickness between about 10 and about 50 microns.

45. (New) The solution of claim 30, wherein at least one of the Ar and the Ar' groups is a trifluorovinyl aromatic ether.

46. (New) The solution of claim 30, wherein the Ar and the Ar' groups each comprise substituted or nonsubstituted aryls selected from the group comprising:



A5 cont.